



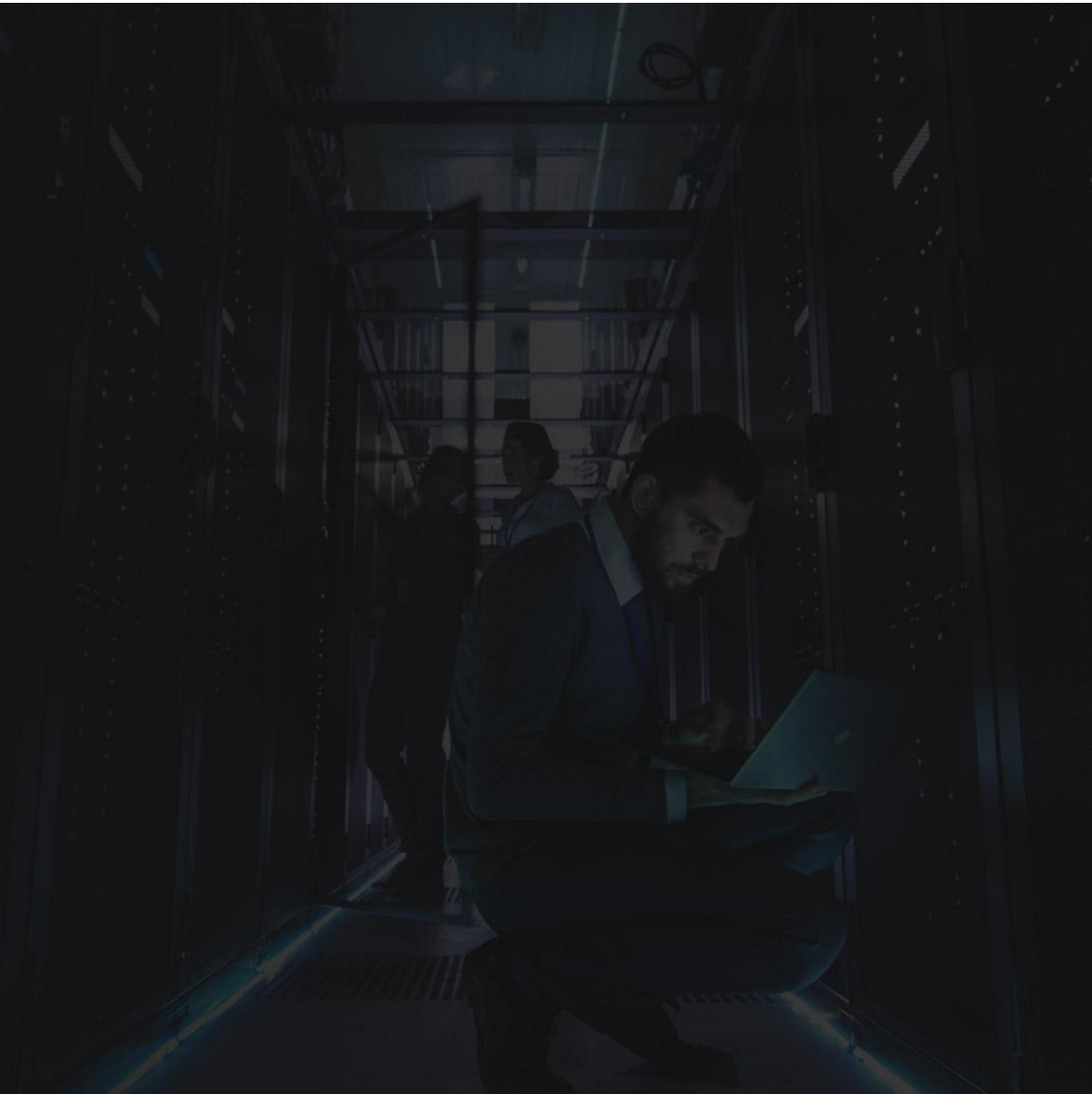
IPv6 Addressing & Subnetting

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Question-1

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Question-1

+ How many bits does an IPv6 address consume?

+ [1.9]

☐

A. 32

☐

B. 64

☐

C. 96

☐

D. 128

☐

E. 160

ANSWER

+ How many bits does an IPv6 address consume?

+ [1.9]

☐

A. 32

☐

B. 64

☐

C. 96

☒

D. 128

☐

E. 160



Question-2

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Question-2

- + What is the full-expanded version of the IPv6 address shown here:
- + 2001:11:2222:0:13:5555:200:abc
- + [1.8]

☐ A. 2001:1100:2222:0000:1300:5555:2000:abc0

☐ B. 2001:1100:2222:0000:0130:5555:0200:0abc

☐ C. 2001:0011:2222:0000:0013:5555:0200:0abc

☐ D. 2001:1111:2222:0000:1313:5555:0200:0abc

☐ E. 2001:0011:2222:0000:1300:5555:0200:abc0

ANSWER

- + What is the full-expanded version of the IPv6 address shown here:
- + 2001:11:2222:0:13:5555:200:abc
- + [1.8]

☐ A. 2001:1100:2222:0000:1300:5555:2000:abc0

☐ B. 2001:1100:2222:0000:0130:5555:0200:0abc

☒ C. 2001:0011:2222:0000:0013:5555:0200:0abc

☐ D. 2001:1111:2222:0000:1313:5555:0200:0abc

☐ E. 2001:0011:2222:0000:1300:5555:0200:abc0



Question-3

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Question-3

- + Which of the following answers represents the shortest way one could abbreviate the IPv6 address that follows:

2001:0000:0000:00ab:0000:a123:0000:0040

☐

A. 2001:0:0:ab:0:a123::40

☐

C. 2001::ab::a123::40

☐

B. 2001::ab::a123:0:40

☐

D. 2001::ab:0:a123:0:40

ANSWER

- + Which of the following answers represents the shortest way one could abbreviate the IPv6 address that follows:

2001:0000:0000:00ab:0000:a123:0000:0040

- | | |
|--|---|
| <input type="checkbox"/> A. 2001:0:0:ab:0:a123::40 | <input type="checkbox"/> C. 2001::ab::a123::40 |
| <input type="checkbox"/> B. 2001::ab::a123:0:40 | <input checked="" type="checkbox"/> D. 2001::ab:0:a123:0:40 |



Question-4

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Question-4

+ Match the following IPv6 addresses to their respective type identification. [1.9]

FE80:23ff:fe11:2222

FF02::A

230a:1111::223e

FD80:23ff:fe11:2222

Unique Local Address

Link Local Address

Global Unicast Address

Multicast Address

ANSWER

+ Match the following IPv6 addresses to their respective type identification. [1.9]

FE80:23ff:fe11:2222

Link Local Address

FF02::A

Multicast Address

230a:1111::223e

Global Unicast Address

FD80:23ff:fe11:2222

Unique Local Address



Question-5

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Question-5

- + What subnet mask is strongly recommended to be applied to IPv6 subnets where end-user devices and VLANs reside?
- + [1.8]

☐

A. /32

☐

B. /48

☐

C. /56

☐

D. /64

☐

E. /96

ANSWER

- + What subnet mask is strongly recommended to be applied to IPv6 subnets where end-user devices and VLANs reside?
- + [1.8]

☐

A. /32

☐

B. /48

☐

C. /56

☒

D. /64

☐

E. /96



Question-6

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Question-6

- + Your company is given the IPv6 network of 2006:1111:2222::/48 from your Service Provider. You wish to divide this into subnets with each subnet containing a /64 netmask.
- + Given the above information, what will be the address of your 22nd subnet?
- + [1.8]

☐

A. 2001:1111:2222:15::/64

☐

B. 2001:1111:2222::22::/64

☐

C. 2001:1111:2222::2200::/64

☐

D. 2001:1111:2222:1500::/64

☐

E. None of these answers are correct

ANSWER

- + Your company is given the IPv6 network of 2006:1111:2222::/48 from your Service Provider. You wish to divide this into subnets with each subnet containing a /64 netmask.
- + Given the above information, what will be the address of your 22nd subnet?
- + [1.8]



A. 2001:1111:2222:15::/64



B. 2001:1111:2222::22::/64



C. 2001:1111:2222::2200::/64



D. 2001:1111:2222:1500::/64

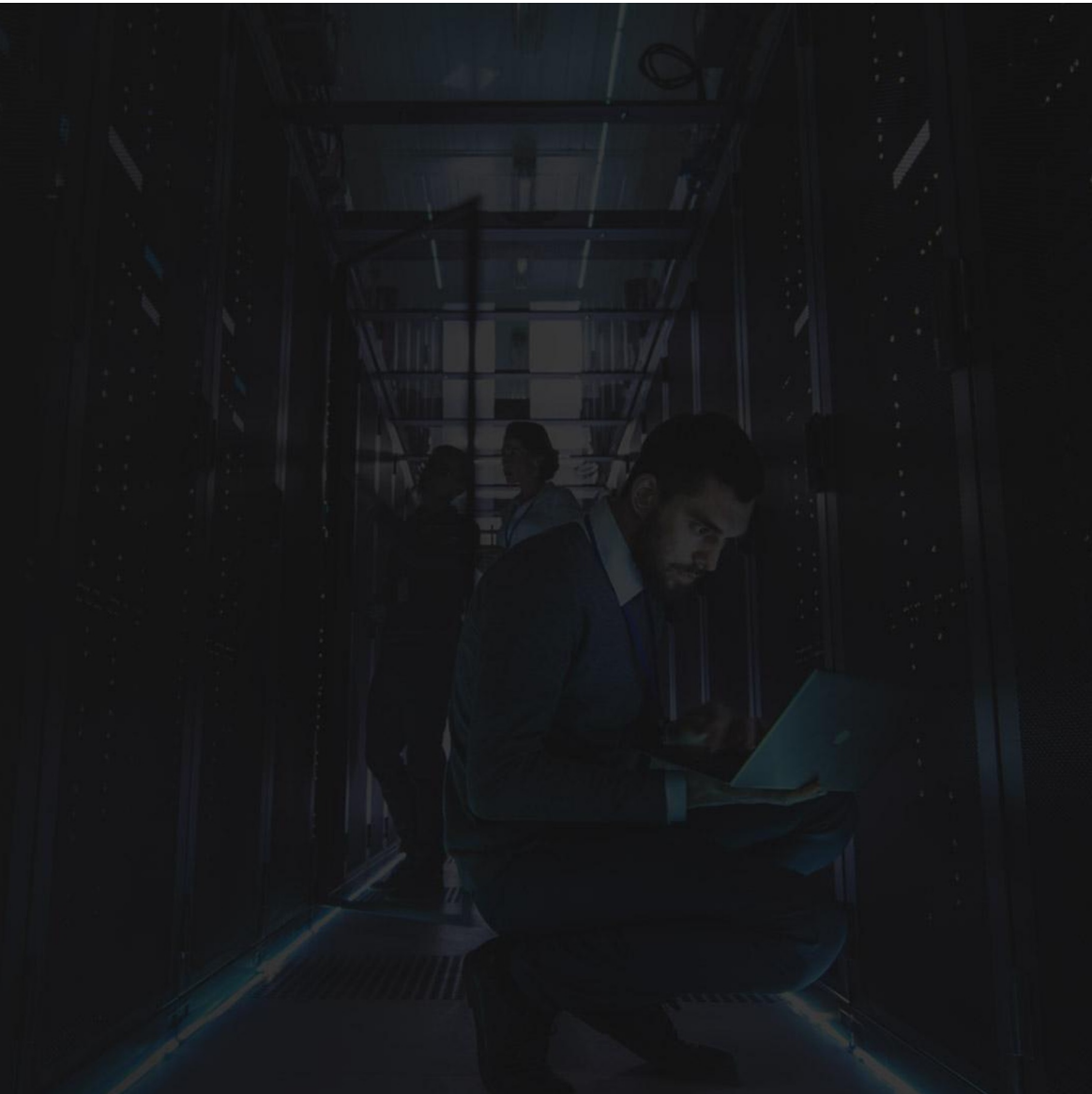


E. None of these answers are correct



Question-7

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Question-7

- + Given the IPv6 address of 2001:2222::1a33:5555/64 what portion of this address is denoted by ::1a33:5555?
- + [1.9]

☐

A. The Host Bits

☐

B. The Interface Identifier

☐

C. The NIC Address

☐

D. The Device Identifier

☐

E. The Nomenclature Bits

ANSWER

- + Given the IPv6 address of 2001:2222::1a33:5555/64 what portion of this address is denoted by ::1a33:5555?
- + [1.9]

☐

A. The Host Bits

☒

B. The Interface Identifier

☐

C. The NIC Address

☐

D. The Device Identifier

☐

E. The Nomenclature Bits



Question-8

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Question-8

+ Which of the following is the correct command to add the IPv6 address of 2001:2222::4567 to interface Gig0/0 along with a /64 netmask?

+ [1.8]

☐ A. (config)#Gig0/0 address ipv6 2001:2222::4567/64

☐ B. (config)#Gig0/0 address ipv6 2001:2222::4567 /64

☐ C. (config-if)#ipv6 address 2001:2222::4567/64

☐ D. (config-if)#ipv6 address 2001:2222::4567 /64

☐ E. None of these answers are correct

ANSWER

+ Which of the following is the correct command to add the IPv6 address of 2001:2222::4567 to interface Gig0/0 along with a /64 netmask?

+ [1.8]

☐ A. (config)#Gig0/0 address ipv6 2001:2222::4567/64

☐ B. (config)#Gig0/0 address ipv6 2001:2222::4567 /64

☒ C. (config-if)#ipv6 address 2001:2222::4567/64

☐ D. (config-if)#ipv6 address 2001:2222::4567 /64

☐ E. None of these answers are correct



Question-9

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Question-9

- + Interface Gig0/0 on router R2 contains the MAC address of 2022:fafb:1111. This interface has been configured with the following command:
- + Ipv6 address 2001:22::/64 eui-64
- + Which of the following answers display the full IPv6 address that will be applied to this interface?
- + [1.8 & 1.9]

☐

A. 2022:fafb:1111::2001:22/64

☐

B. 2001:22:2022:fafb::11ff:fe11/64

☐

C. 2001:22::2022:faff:fefb:1111/64

☐

D. 2001:2200::2022:faff:fefb:1111/64

☐

E. 2001:22::2222:faff:fefb:1111/64

ANSWER

- + Interface Gig0/0 on router R2 contains the MAC address of 2022:fafb:1111. This interface has been configured with the following command:
- + Ipv6 address 2001:22::/64 eui-64
- + Which of the following answers display the full IPv6 address that will be applied to this interface?
- + [1.8 & 1.9]

☐

A. 2022:fafb:1111::2001:22/64

☐

B. 2001:22:2022:fafb::11ff:fe11/64

☐

C. 2001:22::2022:faff:fefb:1111/64

☐

D. 2001:2200::2022:faff:fefb:1111/64

☒

E. 2001:22::2222:faff:fefb:1111/64



Question-10

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Question-10

+ What command must exist on a Cisco router so that router can be enabled with a dynamic IPv6 routing protocol such as OSPF or EIGRP?

+ [1.8]

☐

A. (config)#ipv6 routing-enabled

☐

B. (config)#ipv6 unicast-routing

☐

C. (config)#ipv6-routing enable

☐

D. (config)#ipv6 unicast-enable

☐

E. (config)#ipv6 unicast-route

ANSWER

+ What command must exist on a Cisco router so that router can be enabled with a dynamic IPv6 routing protocol such as OSPF or EIGRP?

+ [1.8]

☐

A. (config)#ipv6 routing-enabled

☒

B. (config)#ipv6 unicast-routing

☐

C. (config)#ipv6-routing enable

☐

D. (config)#ipv6 unicast-enable

☐

E. (config)#ipv6 unicast-route



Question-11

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Question-11

+ Which of the following is a stateful method for providing dynamic IPv6 addresses to hosts?

+ [1.9]

☐

A. DHCPv6

☐

B. SLAAC

☐

C. IPv6 ARP

☐

D. NATv6

☐

E. None of these answers are correct

ANSWER

+ Which of the following is a stateful method for providing dynamic IPv6 addresses to hosts?

+ [1.9]



A. DHCPv6



B. SLAAC



C. IPv6 ARP



D. NATv6



E. None of these answers are correct



Question-12

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Question-12

+ Which of the following statements about packets addressed with IPv6 Link-Local addresses are true?

+ (Select two answers)

+ [1.9]

- ☐ A. They can be routed between subnets
- ☐ B. The addresses start with the well-known pattern of FE80:
- ☐ C. The addresses start with the well-known pattern of FFFE:
- ☐ D. They are multicast in nature and operation
- ☐ E. The link-local address of a node is automatically generated

ANSWER

+ Which of the following statements about packets addressed with IPv6 Link-Local addresses are true?

+ (Select two answers)

+ [1.9]

☐ A. They can be routed between subnets

☒ B. The addresses start with the well-known pattern of FE80:

☐ C. The addresses start with the well-known pattern of FFFE:

☐ D. They are multicast in nature and operation

☒ E. The link-local address of a node is automatically generated



Question-13

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Question-13

- + What Cisco IOS command enables IPv6 processing as well as a link-local address on an interface, but adds no other unicast IPv6 address to that interface?
- + [1.8]

☐

A. (config-if)#ipv6 enable

☐

B. (config-if)#ipv6 address dhcp

☐

C. (config-if)#ipv6 address autoconfig

☐

D. (config-if)#ipv6 link-enable

☐

E. None of these answers are correct

ANSWER

- + What Cisco IOS command enables IPv6 processing as well as a link-local address on an interface, but adds no other unicast IPv6 address to that interface?
- + [1.8]



A. (config-if)#ipv6 enable



B. (config-if)#ipv6 address dhcp



C. (config-if)#ipv6 address autoconfig



D. (config-if)#ipv6 link-enable



E. None of these answers are correct



Question-14

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Question-14

+ Match the following IPv6 multicast addresses with their usage. [1.9]

FF02::1

All IPv6 EIGRP Routers

FF02::2

All IPv6 OSPF Routers

FF02::5

All IPv6 Nodes

FF02::9

All IPv6 Routers

FF02::A

All IPv6 RIPng Routers

ANSWER

+ Match the following IPv6 multicast addresses with their usage. [1.9]

FF02::1

All IPv6 Nodes

FF02::2

All IPv6 Routers

FF02::5

All IPv6 OSPF Routers

FF02::9

All IPv6 RIPng Routers

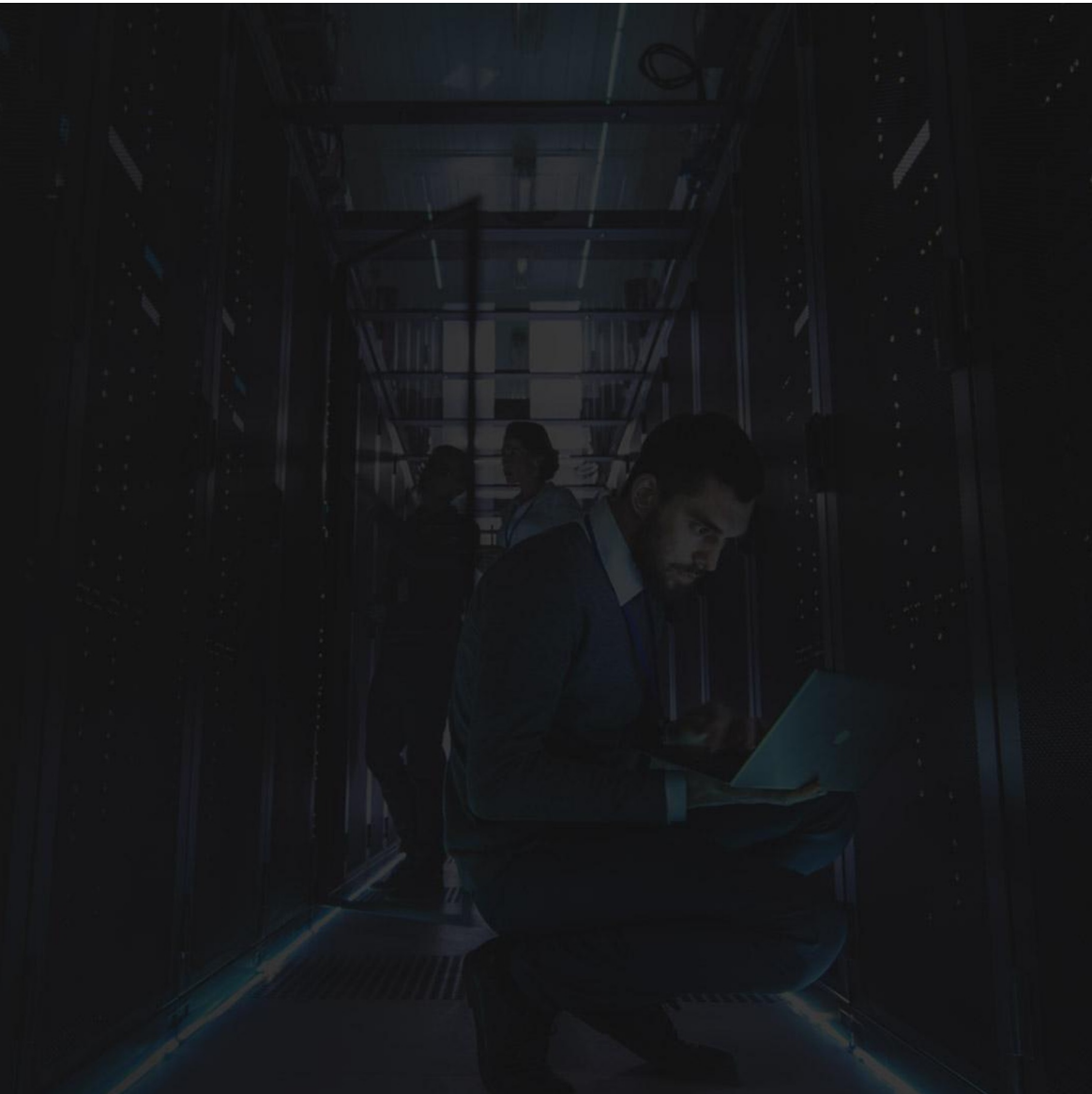
FF02::A

All IPv6 EIGRP Routers



Question-15

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Question-15

- + Which of the following is an IPv6 Multicast address that is bounded by a Site-Local scope?
- + [1.9]

☐ A. FF03::4444

☐ B. FF02::5555

☐ C. FF05::22ab

☐ D. FF08::112a

☐ E. FF01::5677

ANSWER

- + Which of the following is an IPv6 Multicast address that is bounded by a Site-Local scope?
- + [1.9]

☐

A. FF03::4444

☐

B. FF02::5555

☒

C. FF05::22ab

☐

D. FF08::112a

☐

E. FF01::5677



Question-16

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Question-16

+ Which of the following represents the IPv6 Loopback address?

+ [1.9]

☐

A. ::

☐

B. ::1

☐

C. ::F

☐

D. FF::FF

☐

E. FE80::1

ANSWER

+ Which of the following represents the IPv6 Loopback address?

+ [1.9]

☐

A. ::

☒

B. ::1

☐

C. ::F

☐

D. FF::FF

☐

E. FE80::1



Thanks for Watching!